

**REMARKS**

The Office Action dated November 24, 2008, has been received and carefully considered. In this response, claims 26, 54, 63, and 64 have been amended. No new matter has been added. Entry of the amendments to claims 26, 54, 63, and 64 is respectfully requested. Reconsideration of the current rejections in the present application is also respectfully requested based on the following remarks.<sup>1</sup>

I. THE OBVIOUSNESS REJECTION OF CLAIMS 26-29, 32, 38-47, 54-61, 63-65, 69, 71, AND 73

On pages 2-5 of the Office Action, claims 26-29, 32, 38-47, 54-61, 63-65, 69, 71, and 73 were rejected under 35 USC § 103(a) as being unpatentable over U.S. Publication No. 2003/0167380 ("Green") in view of U.S. Patent No. 6,598,131 ("Kedem"). This rejection is hereby respectfully traversed.

Under 35 U.S.C. § 103, the Patent Office bears the burden of establishing a prima facie case of obviousness. In re Fine,

---

<sup>1</sup> As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions made by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., assertions regarding dependent claims, whether a reference constitutes prior art, whether references are legally combinable for obviousness purposes) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such in the future.

837 F.2d 1071, 1074 (Fed. Cir. 1988). There are four separate factual inquiries to consider in making an obviousness determination: (1) the scope and content of the prior art; (2) the level of ordinary skill in the field of the invention; (3) the differences between the claimed invention and the prior art; and (4) the existence of any objective evidence, or "secondary considerations," of non-obviousness. Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966); see also KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727 (2007). An "expansive and flexible approach" should be applied when determining obviousness based on a combination of prior art references. KSR, 127 S. Ct. at 1739. However, a claimed invention combining multiple known elements is not rendered obvious simply because each element was known independently in the prior art. Id. at 1741. Rather, there must still be some "reason that would have prompted" a person of ordinary skill in the art to combine the elements in the specific way that he or she did. Id.; In re Icon Health & Fitness, Inc., 496 F.3d 1374, 1380 (Fed. Cir. 2007). Also, modification of a prior art reference may be obvious only if there exists a reason that would have prompted a person of ordinary skill to make the change. KSR, 127 S. Ct. at 1740-41.

As stated in MPEP § 2143, to establish a prima facie case of obviousness, three basic criteria must be met. First, there

must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991).

As stated in MPEP § 2143.03, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981 (CCPA 1974). That is, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382 (CCPA 1970). Applicants respectfully submit that the combination of Green and Kedem fails to disclose all of the claim limitations of claims 26-29, 32, 38-47, 54-61, 63-65, 69, 71, and 73, as described more fully below.

Regarding claim 26, the Examiner asserts that the limitation "so as to accumulate backup data for restoring the original data store to any point in time during the time

interval. . ." is an intended use and is not to be considered for patentability. Applicants respectfully disagree. Specifically, the identified language does not constitute an intended use, but rather clearly defines the manner in which an original data store is being backed up. Applicants have amended claim 26 to make this manner even more clear, and thus further differentiate claim 26 from Green. No new matter has been added and no further search and/or consideration should be required, as the amended claim language is clearly just clarifying what has long been presented in the claims of the present application. Similar amendments have been made to claims 54, 63, and 64.

The Examiner incorrectly notes that "Applicant's present invention fails to enable a restoration of the volume to any point in time during a time interval. . . ." Office Action, page 9. Applicant respectfully submits that the concept is enabled in the specification. See, e.g., [0083] ("Further, the storage management device 38 can provide a virtual volume from any time in the substantially continuous time interval, "Substantially" continuous because of the quantization limits defined by the minimum time increment.); [0011] ("The present invention addresses the shortcomings of current systems by facilitating the recovery of data at any prior point in time,

even when the request is made at a time following the recovery time.")

The Examiner also incorrectly notes that the individual snapshots of Green "may be made in a continuous manner such that a snapshot of the volume is taken at every second." Office Action, page 9. The Office Action also notes that "overlapping snapshots are taken by first starting a new snapshot by writing to a new snapshot cache and thereafter ending the writing to the prior snapshot cache," and cites Green [0103] for this proposition. Applicants respectfully disagree that Green discloses overlapping snapshot caches.

Green paragraph [0103] discloses that "[f]irst, the system waits . . . [i]f a command to take a snapshot is received, then a new snapshot cache is started, all in use data (i.e., data in upper case letters using the convention of Fig. 7) on the volume is primed for later caching, and the previous snapshot cache, if one exists, is ended." Green thus discloses that a new cache may be started, but data between the two snapshots is non-overlapping. See Figure 7, "Cache Granules" section; Figure 9, elements 920, 930, 935, and 940; [0103]; [0104]. Moreover, Applicants' comments with regard to Green Figures 5 and 6a and surrounding text made in Applicants' August 21, 2008 Response are also applicable, and the August 21, 2008 Response is

incorporated herein by reference. Again, Applicant does not agree that Green discloses overlapping snapshots.

Assuming, *arguendo*, that starting a new snapshot cache before ending the previous snapshot is "overlapping," Green still does not disclose "backing up an original data store by receiving all write commands for the original data store during a time interval so as to accumulate backup data to restore the original data store to any point in time during the time interval. . .," as recited in claim 26. The Examiner broadly asserts that "Green provides a means to restore a volume to any point in time during a time interval," apparently by assuming that the system of Green "may be made in a continuous manner such that a snapshot of the volume is taken at every second." Office Action, page 9. Applicants respectfully submit that by maintaining discrete snapshots, the system of Green cannot, "restore a volume to any point in time during a time interval," and thus cannot teach or disclose "backing up an original data store by receiving all write commands for the original data store during a time interval so as to accumulate backup data to restore the original data store to any point in time during the time interval. . .," as recited in claim 26.

Assuming that the system of Green could take snapshots at second intervals, the system and method of Green would still not

be able, for example, to recreate the volume at a time between the creation time of a first snapshot at a time of one second and a second snapshot made at a time of two seconds. Green is not able to restore the volume to any point in time during a time interval; it is only able to restore the volume to a state as it existed at each discrete snapshot. Therefore, Green does not disclose "backing up an original data store by receiving all write commands for the original data store during a time interval so as to accumulate backup data to restore the original data store to any point in time during the time interval. . .," as recited in claim 26. (emphasis added). The system and method of Green does not allow for restoration of data outside of the limited bounds of the individual snapshots.

Kedem also does not disclose backing up an original data store by "backing up an original data store by receiving all write commands for the original data store during a time interval so as to accumulate backup data to restore the original data store to any point in time during the time interval. . .," as claimed. Instead, Kedem discloses a method of managing a remote data image accessed by a local system by creating a local cache of the data image.

Regarding claims 27-29, 32, and 38-47, these claims are dependent upon independent claim 26. If an independent claim is

nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). Thus, since independent claim 26 should be allowable as discussed above, claims 27-29, 32, and 38-47 should also be allowable at least by virtue of their dependency on independent claim 26. Moreover, these claims recite additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination. For example, claim 28 recites that "the original data store comprises a current store and a time store." Green and Kedem, either alone or in combination, fail to disclose or suggest this claimed feature.

Regarding claims 54, 63, 64, 69, and 73, these claims recite subject matter related to claim 26. Thus, the arguments set forth above with respect to claim 26 are equally applicable to claims 54, 63, 64, 69, and 73. Accordingly, it is respectfully submitted that claims 54, 63, 64, 69, and 73 are allowable over Green and Kedem for the same reasons as set forth above with respect to claim 26.

Regarding claims 55-61 and 65, these claims are dependent upon independent claims 54 and 64, respectively. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d

1071 (Fed. Cir. 1988). Thus, since independent claims 54 and 64 should be allowable as discussed above, claims 55-61 and 65 should also be allowable at least by virtue of their dependency on independent claims 54 and 64, respectively. Moreover, these claims recite additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination. For example, claim 59 recites "[t]he method of claim 58 wherein the original data store is implemented as a current store and a time store." Green and Kedem, either alone or in combination, fail to disclose or suggest this claimed feature.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claims 26-29, 32, 38-47, 54-61, 63-65, 69, 71, and 73 be withdrawn.

II. THE OBVIOUSNESS REJECTION OF CLAIMS 30, 31, 33-37, 48-53, 62, 66-68, 70, and 72

On pages 6-8 of the Office Action, claims 30, 31, 33-37, 48-53, 62, 66-68, 70, and 72 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Green in view of Kedem, and in further view of Official Notice. This rejection is hereby respectfully traversed.

The Examiner appears to allege that each of the claims 30, 31, 33-37, 48-53, 62, 66-68, 70, and 72 is rendered obvious by Official Notice, as none of the rejection explanations are accompanied by citations to Green and/or Kedem. Applicants previously traversed and now again traverse this rejection. The Examiner asserts that Applicants' previous traversal was inadequate, in part because "an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art." Office Action, pages 9-10. Applicants respectfully submit that Applicants noted the ambiguity in the Office Action with regard to Official Notice. To clarify, Applicants noted that none of the specific claim rejections (paragraphs 25-34 of the May 21, 2008 Office Action) actually note what is considered by the Examiner to be obvious in view of Green and/or Kedem, and what is taken as Official Notice. Applicants note that the specific claim rejections only note that "Green, in combination with Kedem and Official Notice" allegedly disclose all of the elements of the claim. The Examiner has still clearly not met his burden of establishing Official Notice under MPEP § 2144.03. For example, the Examiner has not provided any basis for Official Notice for a teaching of "both the request to create the virtual data store

and the storage protocol request are received in a single protocol request packet," as recited in claim 30. The same argument may be made for claims 31, 33-37, 48-53, 62, 66-68, 70, and 72.

Additionally, regarding claims 30, 31, 33-37, and 48-53, these claims are dependent upon independent claim 26. Regarding claim 62, this claim is dependent upon independent claim 54. Regarding claims 66-68, these claims are dependent upon independent claim 63. Regarding claims 70 and 72, these claims are dependent upon independent claim 69. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). Thus, since at least independent claims 26, 54, 63, and 69 should be allowable as discussed above, dependent claims 30, 31, 33-37, 48-53, 62, 66-68, 70, and 72 should also be allowable at least by virtue of their dependency the independent claims noted above. In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claims 30, 31, 33-37, 48-53, 62, 66-68, 70, and 72 be withdrawn.

### III. CONCLUSION

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0206, and please credit any excess fees to the same deposit account.

U.S. Patent Application No.: 10/780,004  
Attorney Docket No.: 68865.001005  
Client Reference No.: S07-4001-2C

Respectfully submitted,

Hunton & Williams LLP

By: 

Thomas E. Anderson

Registration No. 37,063

TEA:JBB/tmf

Hunton & Williams LLP  
1900 K Street, N.W.  
Washington, D.C. 20006-1109  
Telephone: (202) 955-1500  
Facsimile: (202) 778-2201

Date: January 26, 2009